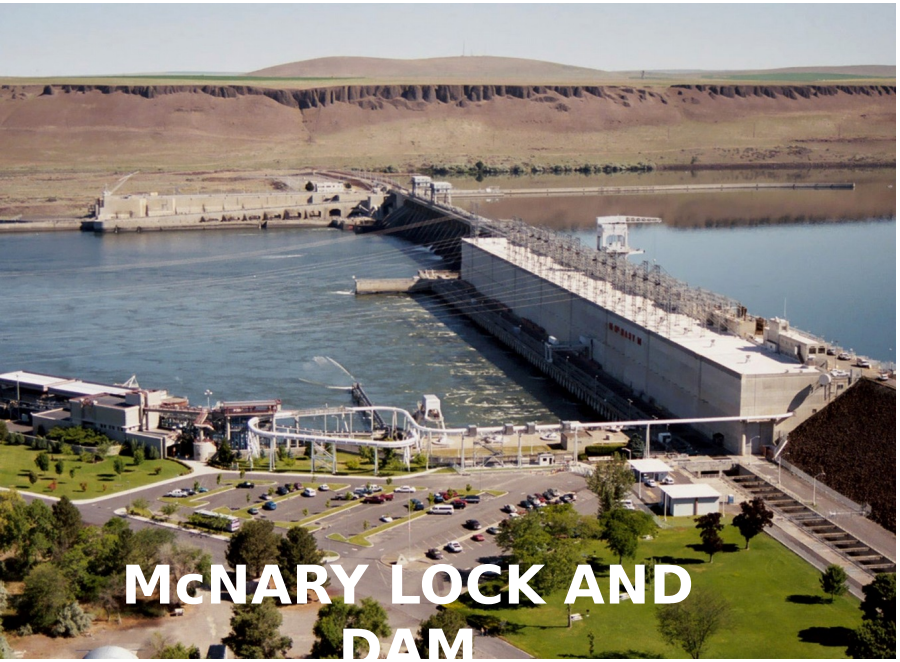
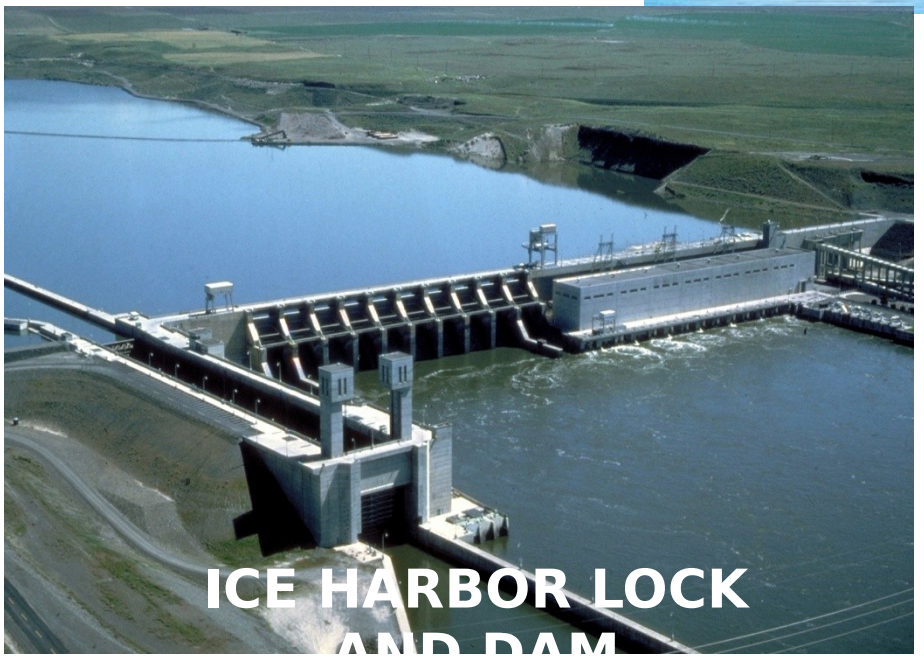
ADULT FISH LADDER MODIFICATIONS FOR LAMPREY
2010-2012

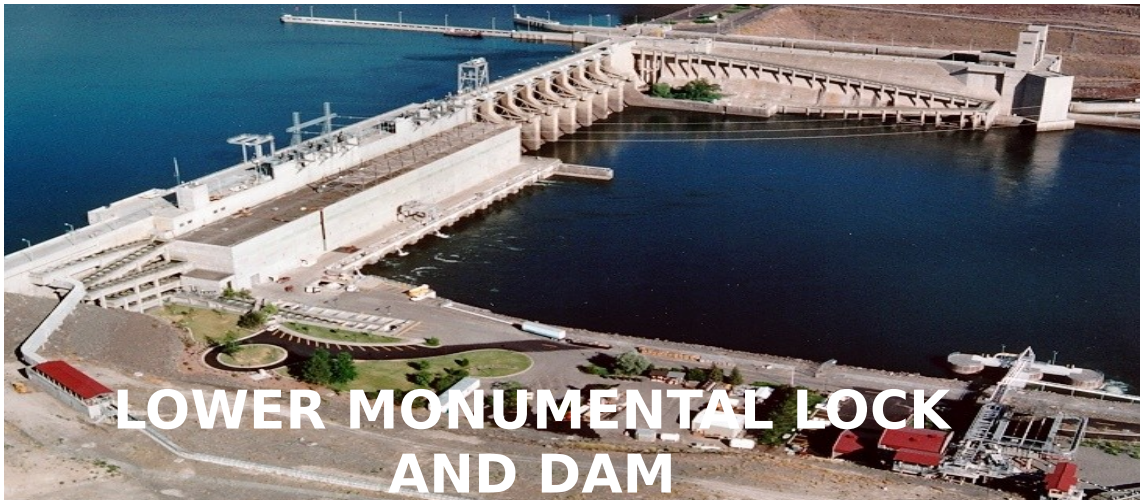
McNARY SOUTH SHORE FISHWAY
ICE HARBOR NORTH AND SOUTH SHORE FISHWAY
LOWER MONUMENTAL NORTH AND SOUTH SHORE FISHWAY

WALLA WALLA DISTRICT (CENWW)

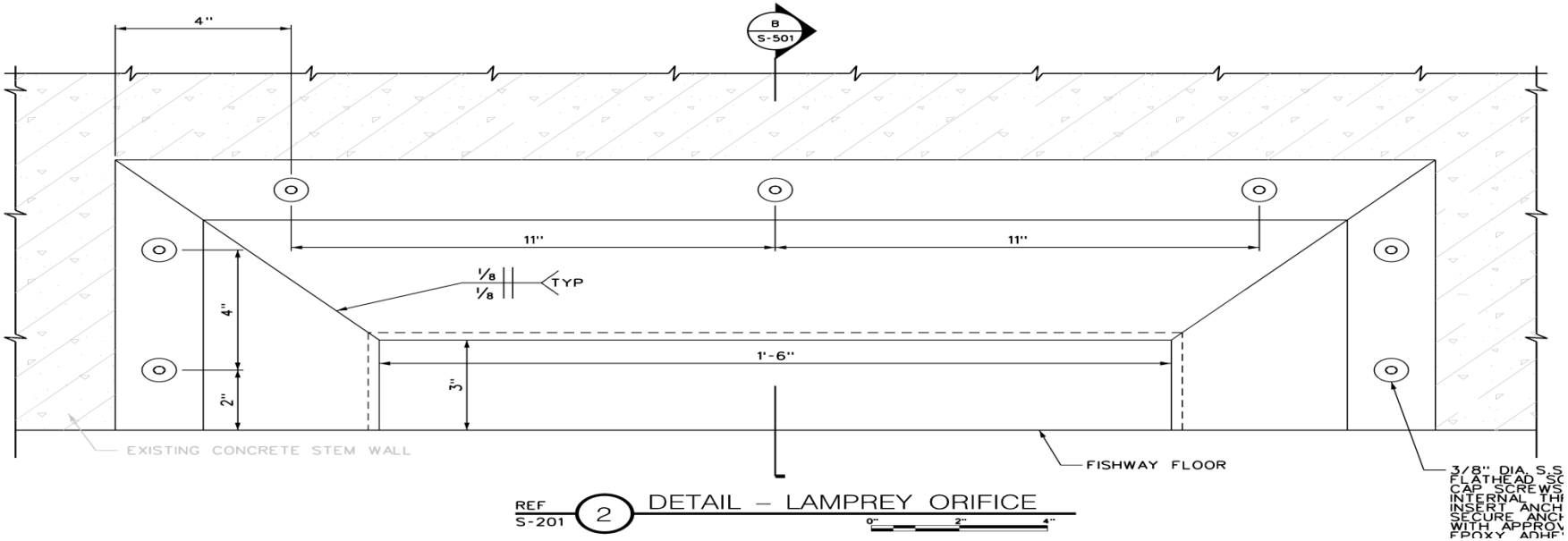
US Army Corps of Engineers®

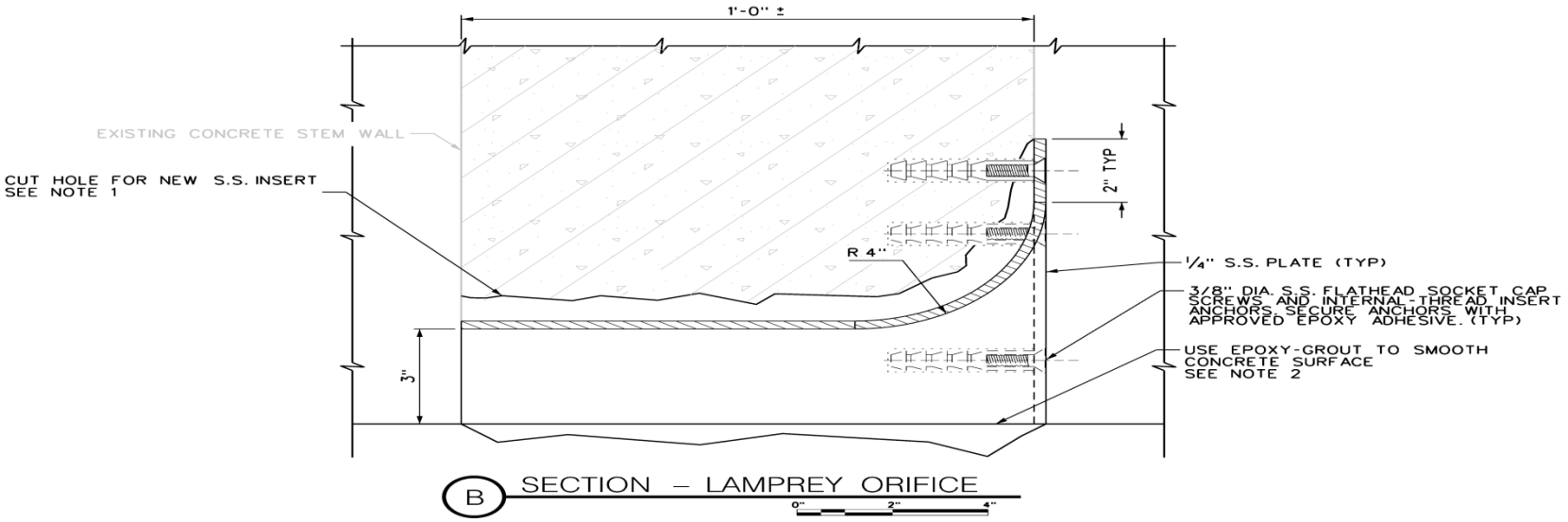






McNARY SOUTH SHORE TILTING WEIR SECTION (before orifice installation)

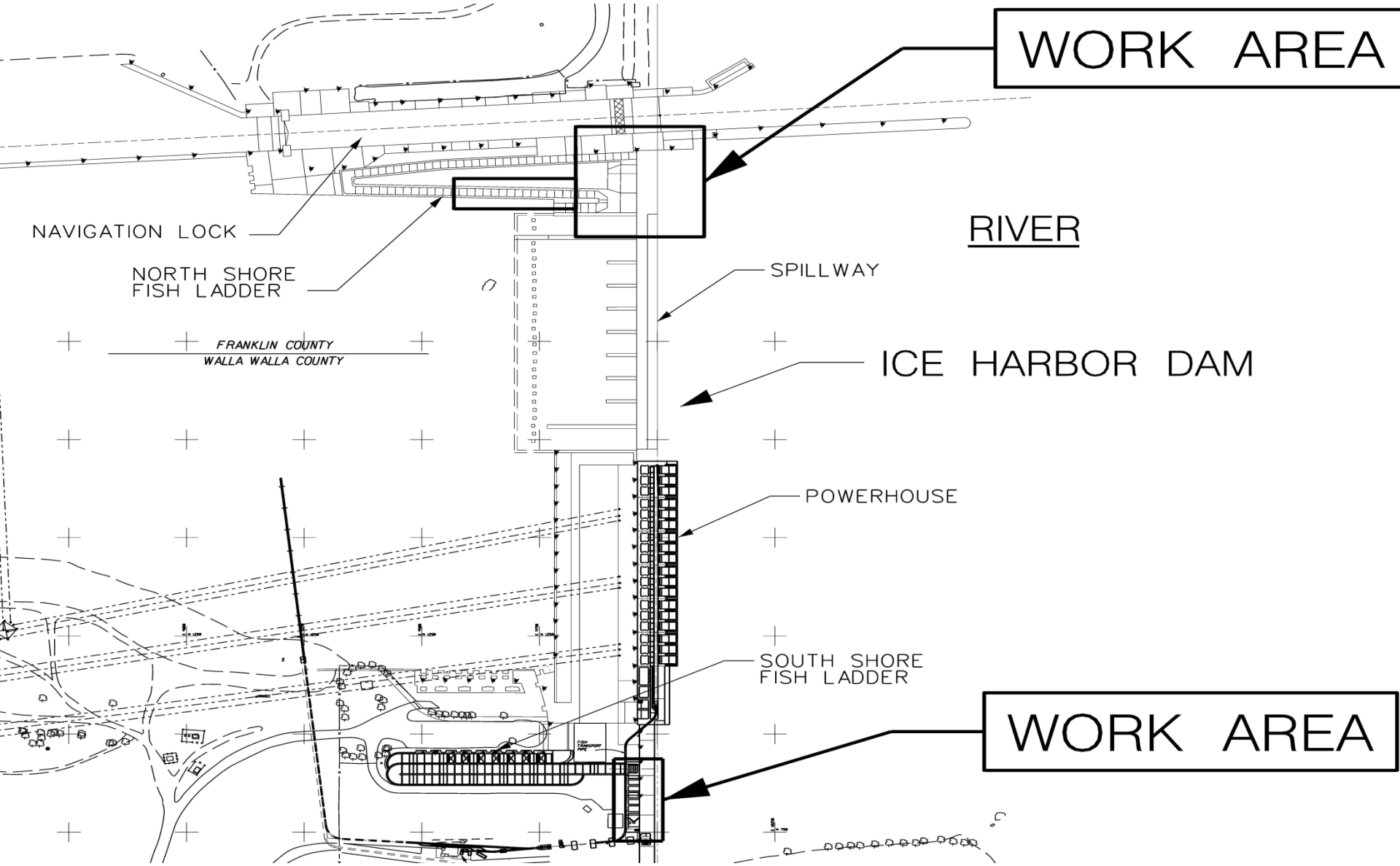




McNARY SOUTH SHORE TILTING WEIRS 338 -344 STEM WALL LAMPREY ORIFICE INSERT DETAILS

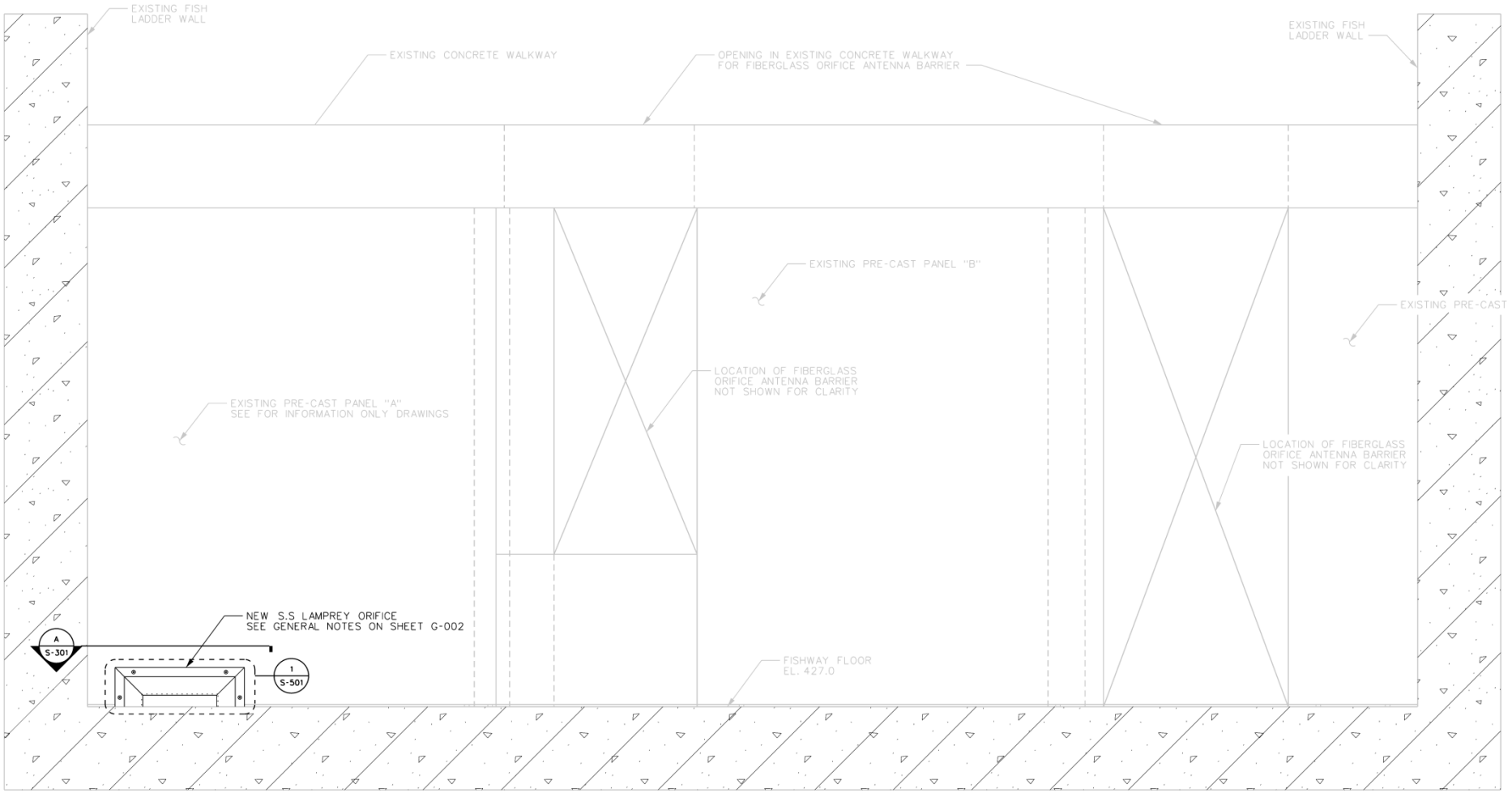
McNARY SOUTH SHORE TILTING WEIRS 338 -344 STEM WALL LAMPREY ORIFICE INSERT AND WEIR WALL PLATING

McNARY SOUTH SHORE LAMPREY DIFFUSER PLATING
(sidewalk design)



ICE HARBOR VICINITY MAP

ICE HARBOR NORTH DIFFUSER GRATING PLATING (landing pads)


EXISTING FISH LADDER WALL
EXISTING CONCRETE WALKWAY
OPENING IN EXISTING CONCRETE WALKWAY FOR FIBERGLASS ORIFICE ANTENNA BARRIER
EXISTING FISH LADDER WALL
EXISTING PRE-CAST PANEL "B"
EXISTING PRE-CAST P
LOCATION OF FIBERGLASS ORIFICE ANTENNA BARRIER NOT SHOWN FOR CLARITY
EXISTING PRE-CAST PANEL "A" SEE FOR INFORMATION ONLY DRAWINGS
LOCATION OF FIBERGLASS ORIFICE ANTENNA BARRIER NOT SHOWN FOR CLARITY
NEW S.S LAMPREY ORIFICE SEE GENERAL NOTES ON SHEET G-002
A S-301
1 S-501
FISHWAY FLOOR EL. 427.0

ELEVATION VIEW –
FISHWAY EXIT WEIRS 435 – 438

NOTE:

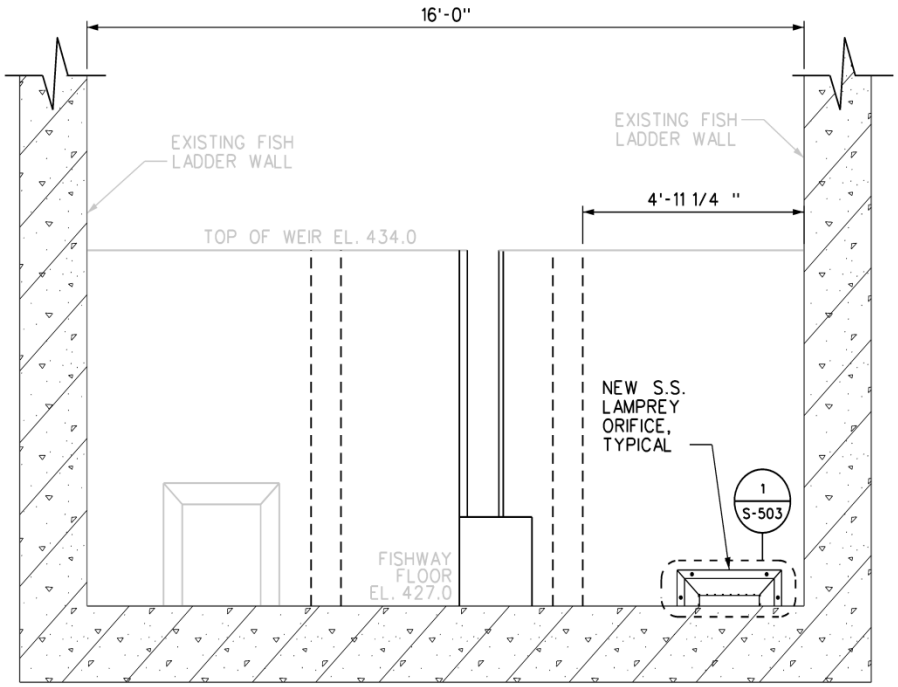
1. DIRECTION OF FLOW IS OUT OF THE SHEET.

2. LAMPREY ORIFICES SHALL BE ANCHORED TO CONCRETE WITH 3/8" DIA. STAINLESS STEEL BUTTONHEAD SOCKET CAP SCREWS

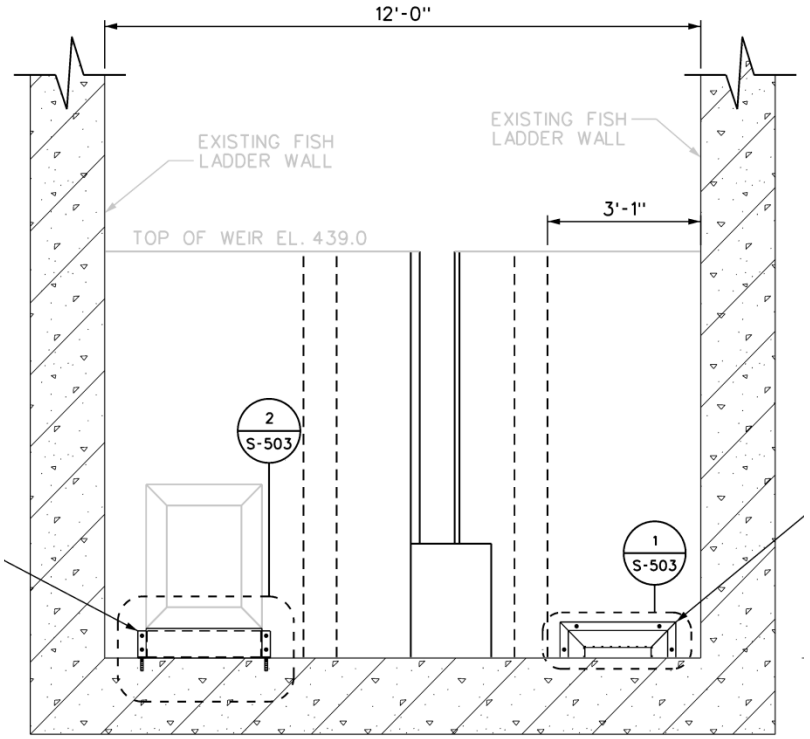
ICE HARBOR NORTH CONTROL SECTION
PIT TAG EQUIPPED WEIRS 435-437 and 439
LAMPREY ORIFICES

ICE HARBOR NORTH CONTROL SECTION
435-437 and 439 LAMPREY ORIFICES

ICE HARBOR NORTH SHORE CONTROL SECTION
WEIR 438 ELEVATED LAMPREY ORIFICE



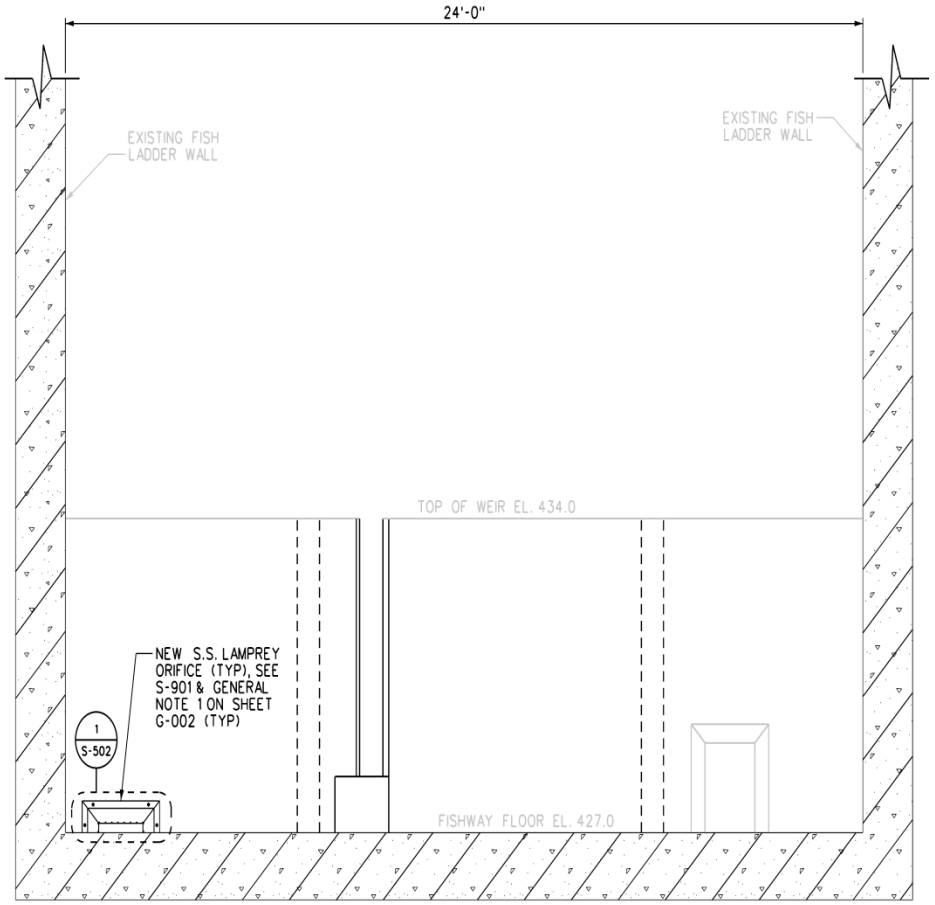
ELEVATION VIEW – DOWNSTREAM FACE
NORTH SHORE FISHWAY EXIT WEIR 434



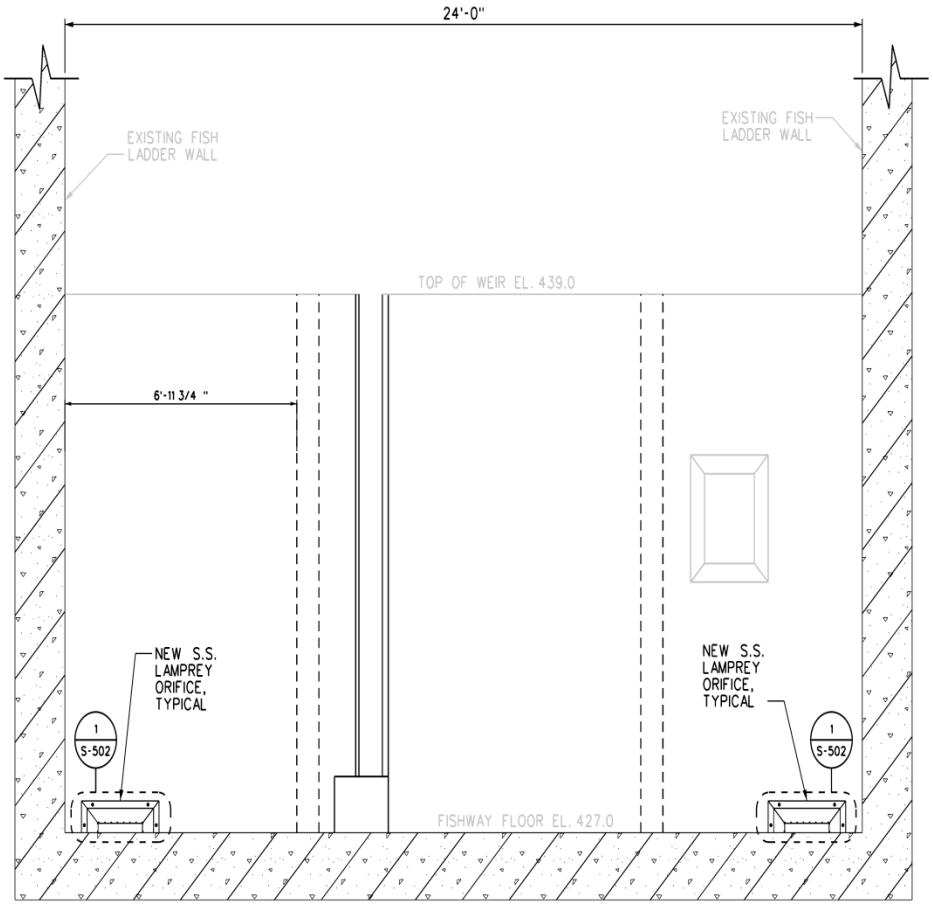
ELEVATION VIEW – DOWNSTREAM FACE
NORTH SHORE FISHWAY EXIT WEIR 439

ICE HARBOR NORTH SHORE CONTROL SECTION WEIRS 434 AND 439 LAMPREY ORIFICES AND RAMP

ICE HARBOR NORTH SHORE CONTROL SECTION WEIR 439 LAMPREY ORIFICES AND RAMP (grating in salmon orifice not normally there)


24'-0"
EXISTING FISH LADDER WALL
EXISTING FISH LADDER WALL
TOP OF WEIR EL. 434.0
NEW S.S. LAMPREY ORIFICE (TYP), SEE S-901 & GENERAL NOTE 1 ON SHEET G-002 (TYP)
1
S-502
FISHWAY FLOOR EL. 427.0

ELEVATION VIEW – DOWNSTREAM FACE
SOUTH SHORE FISHWAY EXIT WEIR 434



ELEVATION VIEW – DOWNSTREAM FACE
SOUTH SHORE FISHWAY EXIT WEIR 439

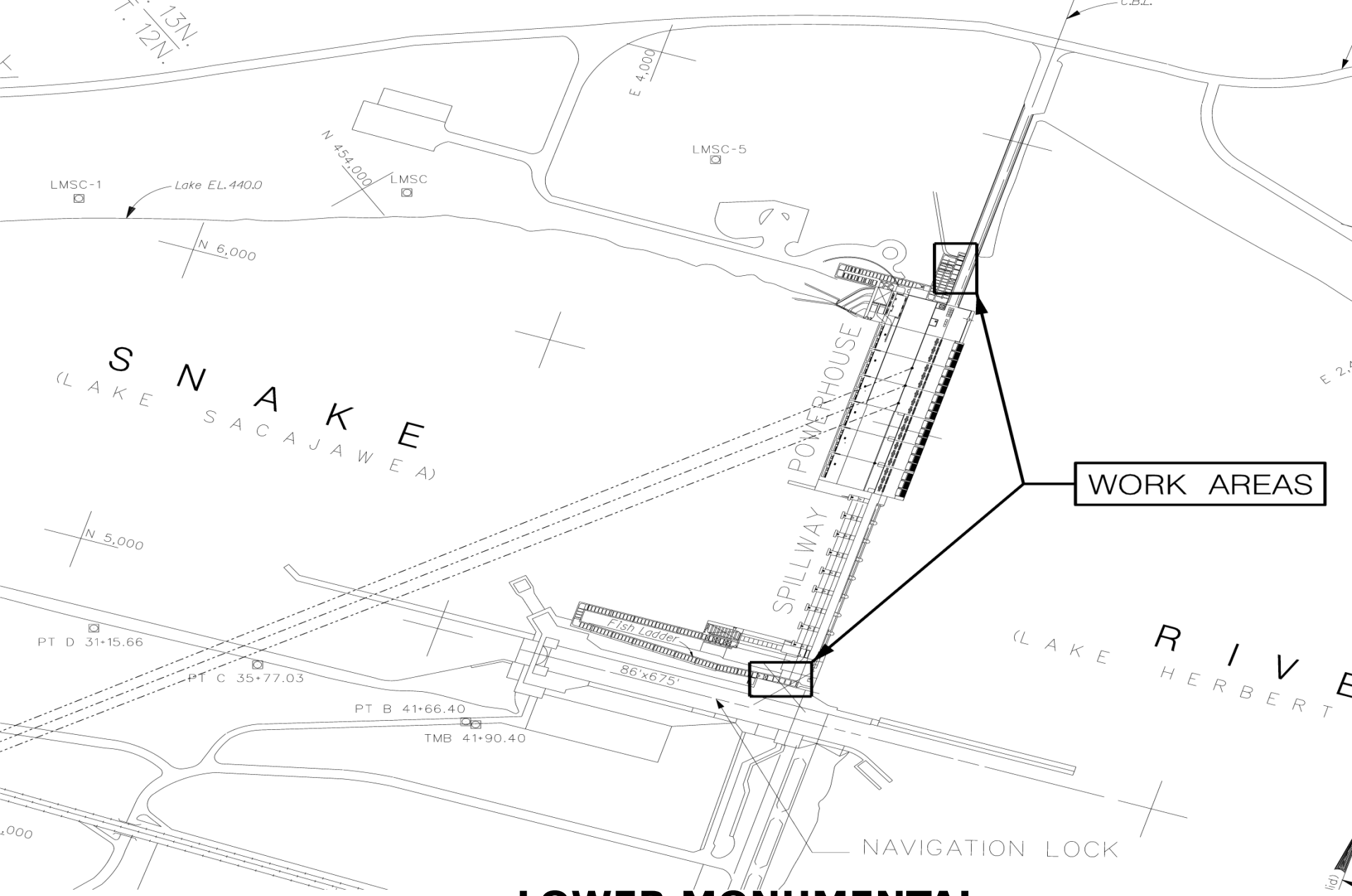
ICE HARBOR SOUTH SHORE CONTROL SECTION
WEIRS 434 AND 439 LAMPREY ORIFICES

ICE HARBOR SOUTH SHORE CONTROL SECTION
WEIRS 434 LAMPREY ORIFICE

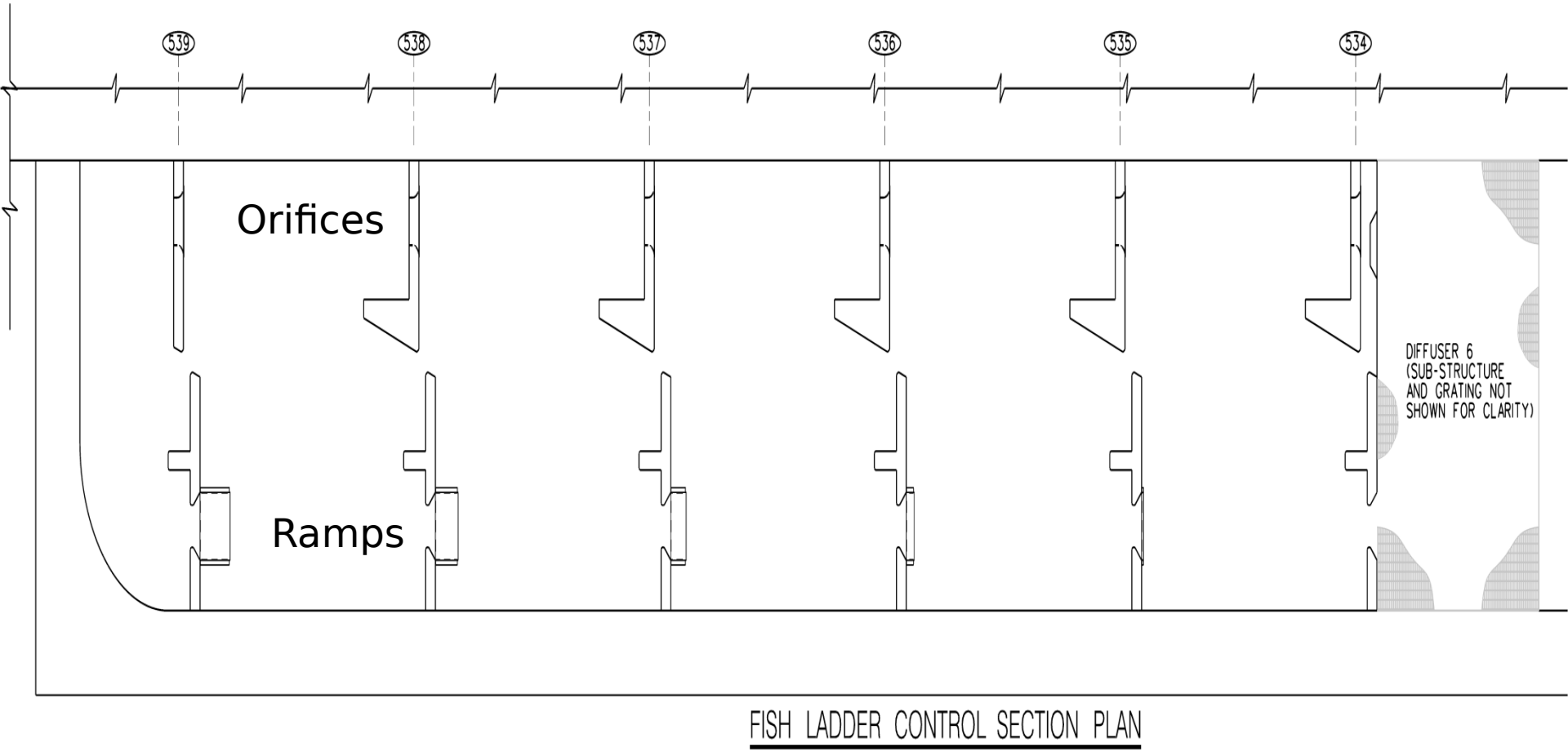
ICE HARBOR SOUTH SHORE COUNTING STATION CLEANUP

Before

After



LOWER MONUMENTAL
VICINITY MAP



LOWER MONUMENTAL NORTH SHORE LADDER CONTROL SECTION
LAMPREY ORIFICES AND RAMPS
(SOUTH SHORE SIMILAR)

LOWER MONUMENTAL NORTH SHORE LADDER CONTROL SECTION
LAMPREY ORIFICES
(SOUTH SHORE SIMILAR)

LOWER MONUMENTAL NORTH SHORE LAMPREY RAMP (SOUTH SHORE SIMILAR)